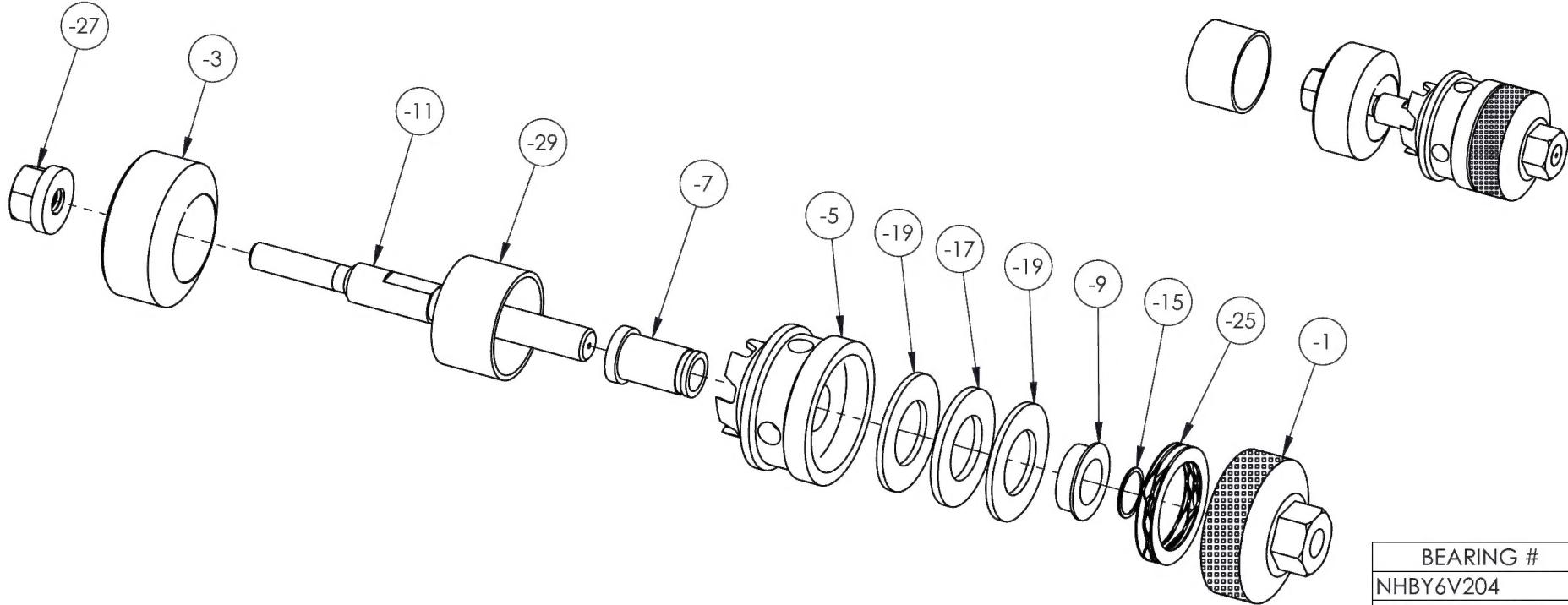


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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	17-0028	UPDATED TO NEW DRAFTING STANDARD. -1, -3, -5, -11 ADDED FINISH SPEC. QMSI-6.2.2, B.O. REV D. -1 CH'D DIM'S WAS (.01.375) IS Ø1.38, WAS 5/16-24 UNF THRU ALL IS 5/16-24 UNF -2B THRU ALL. CH'D MATERIAL WAS 1018 IS 1018/1020 CR. -3, -11 CH'D MATERIAL WAS 4140 Q&T IS 4140/4142, ADDED HEAT TREAT RC 25-32. -5 CH'D DIM WAS (.01.38) IS Ø1.38, -5 CH'D DIM WAS (.01.375) IS Ø1.38. -7, -9 CH'D MATERIAL WAS BRONZE IS BRONZE 660. -11 CH'D DIM'S WAS 5/16-24 IS 5/16-24 UNF -2A, WAS 1/4-20 IS 1/4-20 UNC -2A, -25 CH'D B/O P/N WAS APPLIED SMALLEY RING CO. #CS112-21 IS (APPLIED SMALLEY RING CO. #CS112-H2).	2/28/2017	RJC	JAG
3	17-0087	-1 CH'D DIM'S WAS .400 IS .40, WAS .535 IS .54, WAS .850 IS .85. -3 DELETED ENGRAVE P/N NOTE.	4/17/2017	RJC	JAG



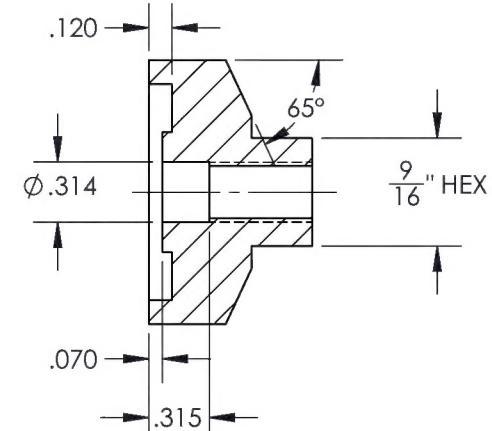
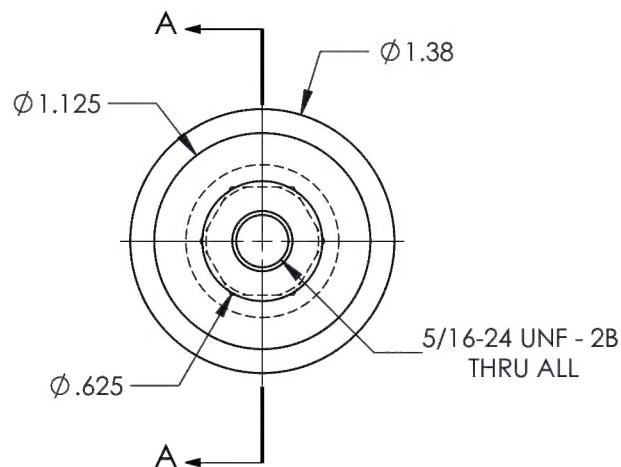
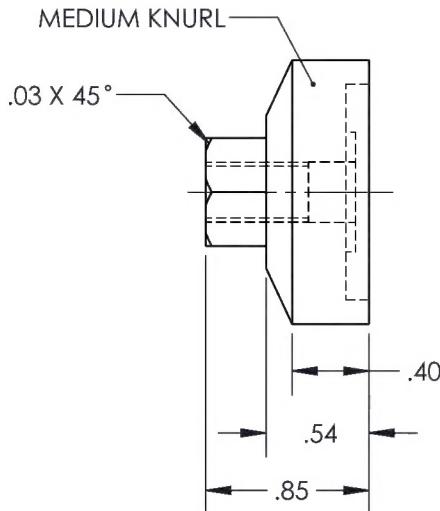
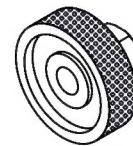
ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.			
			-1	1	SPRING TENSIONER	1018/1020 CR		2			
			-3	1	SEAT	4140/4142		3			
			-5	1	CUTTER	0-1 DRILL ROD		4			
			-7	1	GUIDE	BRONZE 660		5			
			-9	1	BUSHING	BRONZE 660		6			
			-11	1	STUD	4140/4142		7			
B/O			-15	1	SPRIAL RETAINING RING	STEEL	Ø7/16 SHAFT (MCMASTER-CARR #91665A350)	1			
B/O			-17	1	THRUST BEARING		Ø5/8 ID X 1-1/8 OD X 5/64 (APPLIED #NTA-1018)	1			
B/O			-19	2	THRUST WASHER		Ø5/8 ID X 1-1/8 OD X 1/16 (APPLIED #TRB-1018)	1			
B/O			-27	1	SWIVEL HEX FLANGE NUT	STEEL	1/4-20 UNC (MCMASTER-CARR #90477A029)	1			
B/O			-25	1	WAVE SPRING	STEEL	(APPLIED SMALLEY RING CO # CS112-H2)	1			
B/O			-29	1	TOOTH GUARD (FOR SHIPPING ONLY)	VINYL	Ø15/16 ID X 5/8 LONG	1			
B/O			-23	1	SPANNER WRENCH		Ø1-1/2 (MCMASTER-CARR #5475A13)	N/S	SCALE 1:1.5	DATE 9/26/2013	SHEET 1 OF 7

**TITLE**  
PORTABLE BEARING CUTTERS  
**DWG NO.** RBW1006-P **REV** 3

MAT'L UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
HEAT TREAT .XXX ± .005 FRACTIONS ± 1/8  
FINISH .XX ± .01 ANGLES ± 5°  
SPEC .X ± .1 SURFACES = 125 ✓  
DRAWN BY: GILBERT  
CHECKED: DUERFELDT  
OPPS APPR: ANDERSON  
QA APPR: LINDSAY  
APPROVED: GILBERT  
USED ON MODEL  
1. BREAK ALL SHARP EDGES  
.015 x 45° OR .015R  
2. DIMENSIONAL LIMITS APPLY AFTER PLATING  
3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	17-0028	-1 CH'D DIM'S WAS $\{\phi 1.375\}$ IS $\phi 1.38$ , WAS 5/16-24 UNF THRU ALL IS 5/16-24 UNF -2B THRU ALL. CH'D MATERIAL WAS 1018 IS 1018/1020 CR, ADDED FINISH SPEC. QMSI-6.2.2, B.O. REV D.	2/28/2017	RJC	JAG
3	17-0087	-1 CH'D DIM'S WAS .400 IS .40, WAS .535 IS .54, WAS .850 IS .85.	4/17/2017	RJC	JAG



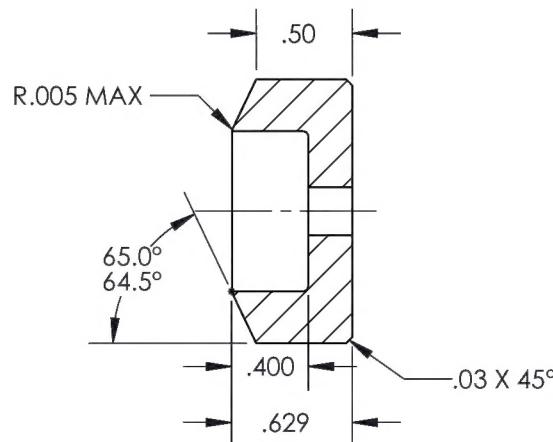
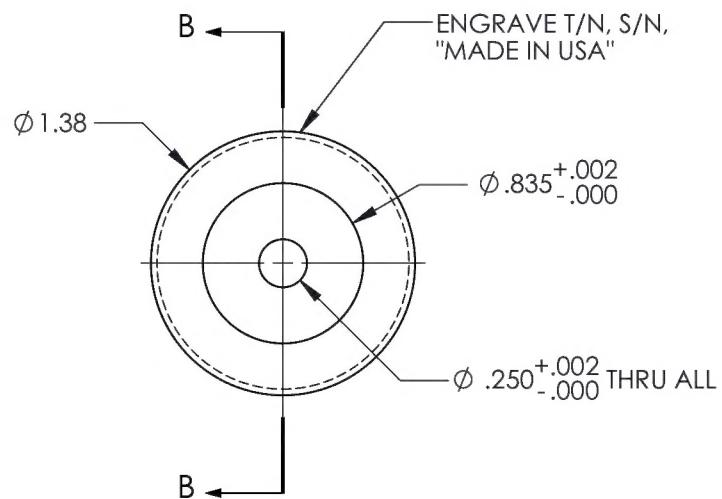
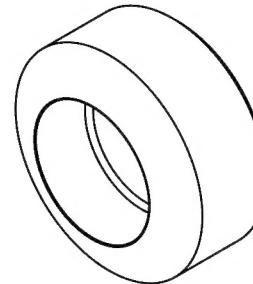
SECTION A-A

(-1)  
SPRING TENSIONER

TITLE	
PORTABLE BEARING CUTTER	
DWG NO.	RBW1006-P-1
MAT'L	1018/1020 CR
HEAT TREAT	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
FINISH	.XXX ± .005 FRACTIONS ± 1/8
SPEC	.XX ± .01 ANGLES ± 5°
DRAWN BY:	GILBERT
CHECKED:	DUERFELDT
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
SCALE	1:1
DATE	9/26/2013
REV 3	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
USED ON MODEL	
SHEET 2 OF 7	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	17-0028	-3 CH'D DIM WAS $(\Phi 1.38)$ IS $\Phi 1.38$ . CH'D MATERIAL WAS 4140 Q&T IS 4140/4142. ADDED HEAT TREAT RC 25-32. ADDED FINISH SPEC. QMSI-6.2.2, B.O. REV D.	2/28/2017	RJC	JAG
3	17-0087	-3 DELETED ENGRAVE P/N NOTE.	4/17/2017	RJC	JAG



SECTION B-B

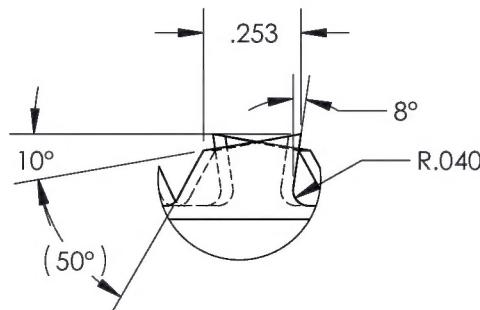
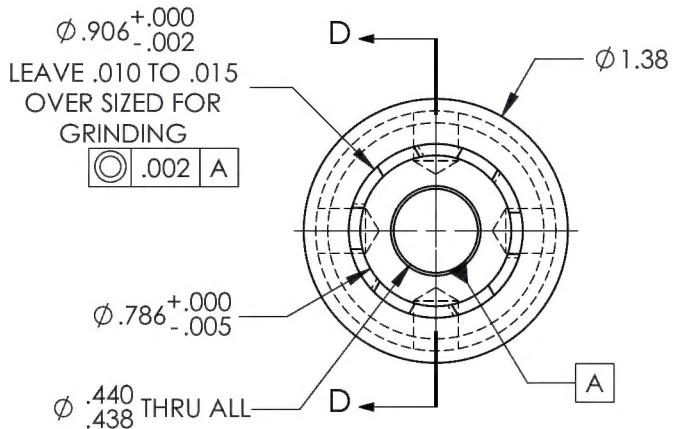
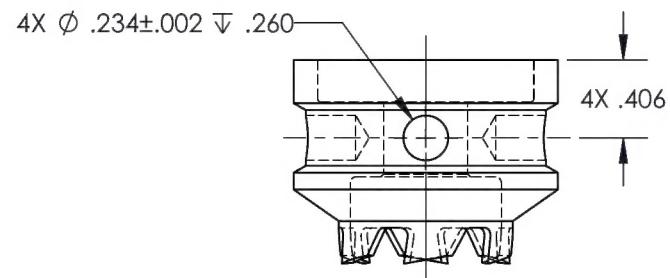
(-3)

SEAT

<b>DART</b> AEROSPACE	
TITLE	
PORTABLE BEARING CUTTER	
DWG NO.	
RBW1006-P-3	
REV 3	
MATERIAL 4140/4142 UNLESS OTHERWISE SPECIFIED	
HEAT TREAT RC 25-32 DIMENSIONS ARE IN INCHES	
FINISH BLACK OXIDE .XXX ± .005 FRACTIONS ± 1/8	
SPEC QMSI-6.2.2, B.O. REV D .XX ± .01 ANGLES ± 5°	
DRAWN BY: GILBERT .X ± .1 SURFACES = 125 ✓	
CHECKED: DUERFELDT	
OPPS APPR: ANDERSON	
QA APPR: LINDSAY	
APPROVED: GILBERT USED ON MODEL	
SCALE 1:1	DATE 9/26/2013
SHEET 3 OF 7	

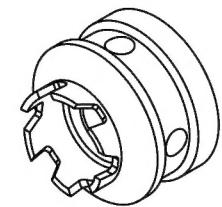
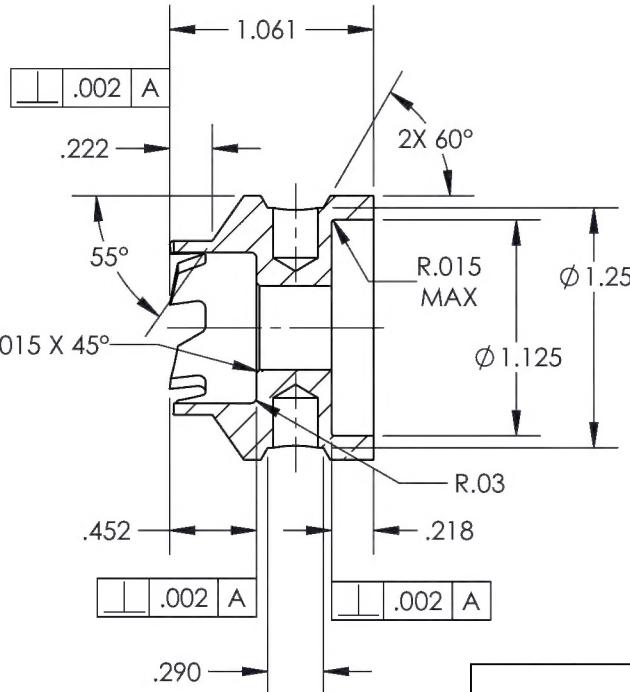
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REV			ECR			DESCRIPTION			DATE			INITIAL			APPROVED		
2	17-0028		<b>-5</b> CH'D DIM WAS $(\varnothing 1.375)$ IS $\varnothing 1.38$ . ADDED FINISH SPEC. QMSI-6.2.2, B.O. REV D.						2/28/2017			RJC			JAG		



DETAIL VIEW  
SCALE 2 : 1  
TYP TO 6 TEETH

(5)  
CUTTER



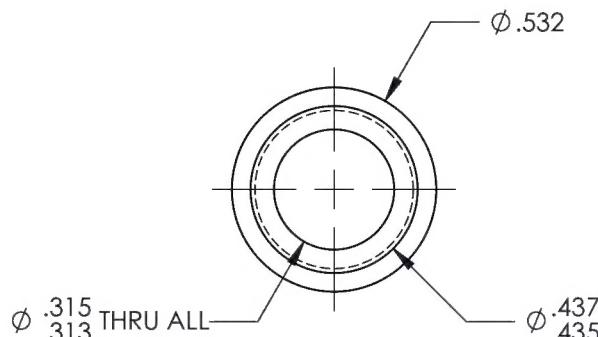
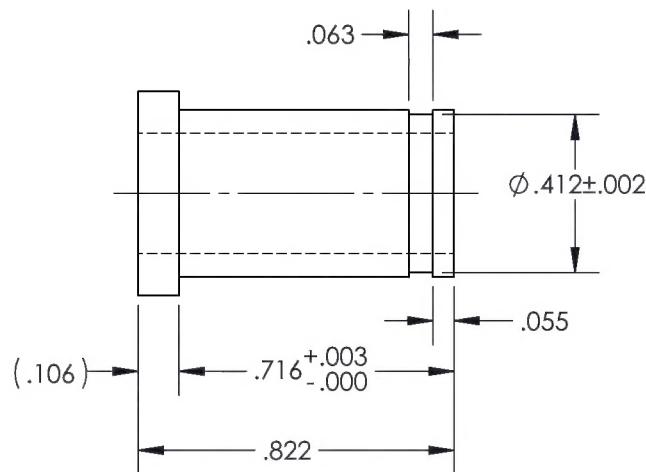
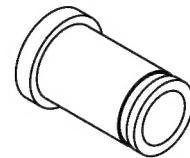
<b>DART</b> AEROSPACE	
TITLE	
PORTABLE BEARING CUTTER	
DWG NO. RBW1006-P-5	
REV 3	
MATERIAL 0-1 DRILL ROD	
HEAT 55-60 HRC	
TREAT	
FINISH BLACK OXIDE	
SPEC QMSI-6.2.2, B.O. REV D	
DRAWN BY: GILBERT	
CHECKED: DUERFELDT	
OPPS APPR: ANDERSON	
QA APPR: LINDSAY	
APPROVED: GILBERT	
USED ON MODEL	
SCALE 1:1	DATE 9/26/2013
SHEET 4 OF 7	

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
.XXX  $\pm .005$  FRACTIONS  $\pm 1/8$   
.XX  $\pm .01$  ANGLES  $\pm 5^\circ$   
X  $\pm .1$  SURFACES = 125 ✓

- BREAK ALL SHARP EDGES  
.015 x 45° OR .015R
- DIMENSIONAL LIMITS APPLY AFTER PLATING
- INTERPRET DIM AND TOL PER ASME Y14.5M-2009

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REVISIONS					
REV	ECR		DESCRIPTION	DATE	INITIAL
2	17-0028	-7	CH'D MATERIAL WAS BRONZE IS BRONZE 660.	2/28/2017	RJC JAG

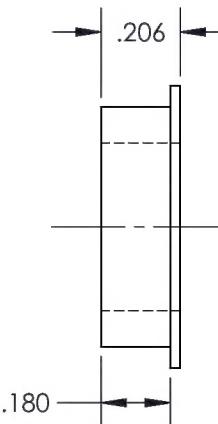
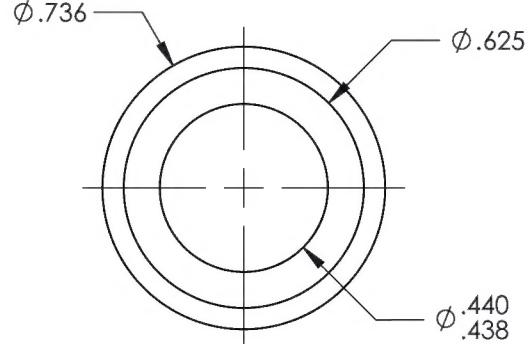
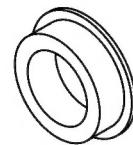


(-7)  
GUIDE

<b>DART</b> AEROSPACE	
TITLE	
PORTABLE BEARING CUTTER	
DWG NO.	
RBW1006-P-7	
REV 3	
MATERIAL BRONZE 660 UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
HEAT XXX ± .005 FRACTIONS ± 1/8	
TREAT XX ± .01 ANGLES ± 5°	
FINISH X ± .1 SURFACES = 125 ✓	
SPEC	
DRAWN BY: GILBERT	
CHECKED: DUERFELDT	
OPPS APPR: ANDERSON	
QA APPR: LINDSAY USED ON MODEL	
APPROVED: GILBERT	
SCALE	2:1
DATE	9/26/2013
SHEET 5 OF 7	

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REVISIONS					
REV	ECR		DESCRIPTION	DATE	INITIAL
2	17-0028	-9	CH'D MATERIAL WAS BRONZE IS BRONZE 660.	2/28/2017	RJC JAG



(-9)

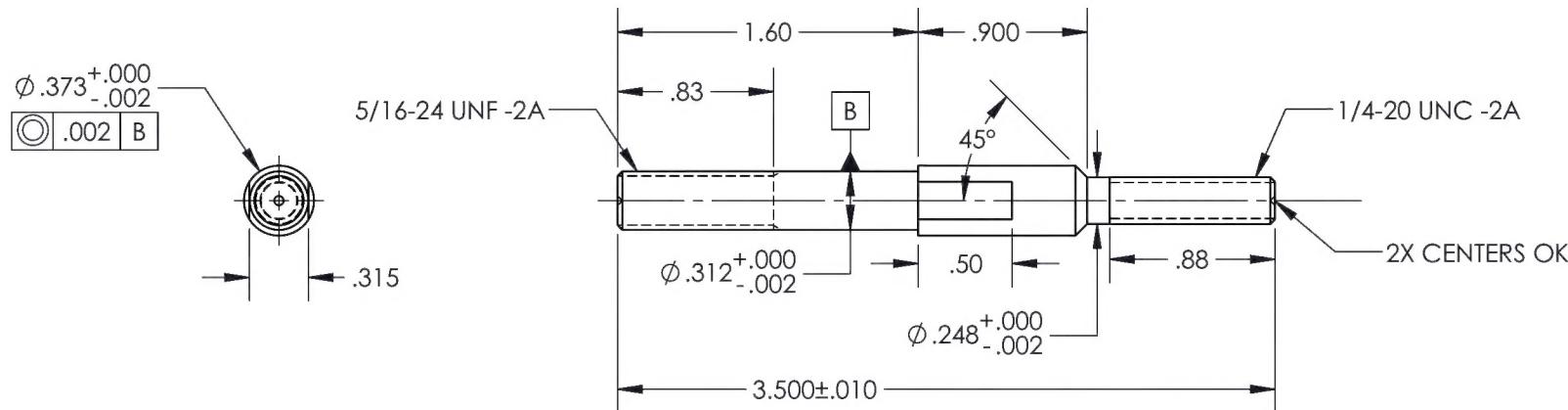
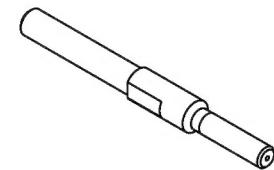
BUSHING

<b>DART</b> AEROSPACE	
TITLE	
PORTABLE BEARING CUTTER	
DWG NO. RBW1006-P-9	
REV 3	
MATERIAL BRONZE 660 UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
HEAT TREAT .XXX ± .005 FRACTIONS ± 1/8	
FINISH .XX ± .01 ANGLES ± 5°	
SPEC X ± .1 SURFACES = 125 ✓	
DRAWN BY: GILBERT	
CHECKED: DUERFELDT	
OPPS APPR: ANDERSON	
QA APPR: LINDSAY USED ON MODEL	
APPROVED: GILBERT	
SCALE 2:1	DATE 9/26/2013
SHEET 6 OF 7	

1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
2. DIMENSIONAL LIMITS APPLY AFTER PLATING
3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	17-0028	-11 CH'D DIM'S WAS 5/16-24 IS 5/16-24 UNF -2A, WAS 1/4-20 IS 1/4-20 UNC -2A. CH'D MATERIAL WAS 4140 Q&T IS 4140/4142, ADDED HEAT TREAT RC 25-32. ADDED FINISH SPEC. QMSI-6.2.2, B.O. REV D.	2/28/2017	RJC	JAG



<b>DART</b> AEROSPACE	
TITLE <b>PORTABLE BEARING CUTTER</b>	
DWG NO. <b>RBW1006-P-11</b>	
REV <b>3</b>	
MATERIAL 4140/4142	
HEAT TREAT RC 25-32	
FINISH BLACK OXIDE	
SPEC QMSI-6.2.2, B.O. REV D	
DRAWN BY: <b>GILBERT</b>	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CHECKED: <b>DUERFELDT</b>	.XXX ± .005 FRACTIONS ± 1/8
OPPS APPR: <b>ANDERSON</b>	.XX ± .01 ANGLES ± 5°
QA APPR: <b>LINDSAY</b>	X ± .1 SURFACES = 125 ✓
APPROVED: <b>GILBERT</b>	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
SCALE 1:1	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
DATE 9/26/2013	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
SHEET 7 OF 7	USED ON MODEL

(-11)

STUD